

INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)

Docket Number (Optional) 02-076 C1	Application Number Unassigned
Applicant(s) Lucien Alfred Couvillon Jr.	
Filing Date Filed Herewith	Group Art Unit Unassigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILED DATE IF APPROPRIATE
A.R.	1	4,273,111	6/16/81	Tsukaya	128	6	
	2	4,286,585	9/1/81	Ogawa	128	6	
	3	4,499,895	2/29/85	Takayama	128	6	
	4	4,503,842	3/12/85	Takayama	128	4	
	5	4,543,090	9/24/85	McCoy	604	95	
	6	4,601,705	7/22/86	McCoy	604	95	
	7	4,753,223	6/28/88	Bremer	128	4	
	8	4,790,624	12/13/88	Van Hoye et al.	350	96.26	
	9	4,846,573	7/11/89	Taylor et al.	356	241	
	10	4,884,557	12/5/89	Takehana et al.	128	4	
A.R.	11	4,899,731	2/13/90	Takayama et al.	128	4	

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO
A.R.	1	WO 01/58973 A2	8/16/01	PCT	C08G		✓	
	2	JP3004830	1/10/91	Japan	A61B1	00	✓	
	3	JP3170125	7/23/91	Japan	A61B1	00	✓	
	4	JP8066351	3/12/96	Japan	A61B1	00	✓	
A.R.	5	JP8322783	12/10/96	Japan	A61B1	00	✓	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

A.R.	1	Jae-Do Nam, "Electroactive Polymer (EAP) Actuators and Devices for Micro-Robot Systems" 28 November 2000.
A.R.	2	"Snake-like Robot Endoscopes", from http://robby.Caltech.edu/~chen/res-medical.html , page updated 14 August 1996.

EXAMINER

Aaron Bond

DATE CONSIDERED

8/19/2004

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)

ATTY DOCKET NO.
02-076 C1

SERIAL NO.
Unassigned

Lucien Alfred Couvillon Jr.

FILING GROUP
Filed Herewith Unassigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AR	12 4,930,494	6/5/90	Takehana et al.	128	4	
	13 4,977,886	12/18/90	Takehana et al.	128	4	
	14 4,987,314	1/22/91	Gotanda et al.	250	551	
	15 5,188,111	2/23/93	Yates et al.	128	657	
	16 5,268,082	12/7/93	Oguro et al.	204	282	
	17 5,337,732	8/16/94	Grundfest et al.	128	4	
	18 5,396,879	3/14/95	Wilk et al.	128	4	
	19 5,431,645	7/11/95	Smith et al.	606	1	
	20 5,482,029	1/9/96	Sekiguchi et al.	600	109	
	21 5,492,131	2/20/96	Galel	128	772	
AR	22 5,556,370	9/17/96	Maynard	600	151	

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
AR	6 JP10014863	1/20/98	Japan	A61B1	00	✓	
AR	7 ES 2 048 086	1/17/92	Spain	H01B1	12		✓
AR	8 ES 2 062 930	12/28/92	Spain	H01B1	12		✓

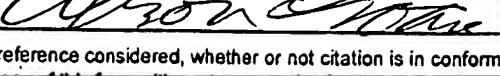
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	3	Peirs et al., "Miniature Parallel Manipulators for Integration in a Self-propelling Endoscope," IUPAP P4/24 IMechS Workshop, 27 October 1999.
AR	4	"Walking machines: 0-legged-robots," compiled by C. Dunten, 26 August 2000.

EXAMINER	<i>Alfred Couvillon Jr.</i>	DATE CONSIDERED
		8/9/2004

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				ATTY DOCKET NO. 02-076 C1	SERIAL NO. Unassigned		
				Lucien Alfred Couvillon Jr.			
				FILING Filed Herewith	GROUP Unassigned		
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>AR</i>	23	5,624,380	4/29/97	Takayama et al.	600	146	
	24	5,631,040	5/20/97	Takuchi et al.	427	100	
	25	5,645,520	7/8/97	Nakamura et al.	600	151	
	26	5,662,587	9/2/97	Grundfest et al.	600	114	
	27	5,855,565	1/5/99	Bar-Cohen et al.	604	104	
	28	5,857,962	1/12/99	Bracci et al.	600	105	
	29	5,873,817	2/23/99	Kokish et al.	600	143	
	30	5,916,146	6/29/99	Allotta et al.	600	141	
	31	6,162,171	12/19/00	Ng et al.	600	141	
	32	5,090,956	2/25/92	McCoy	604	95	
<i>AR</i>	33	5,906,591	5/25/99	Dario et al.	604	95	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
<i>AR</i>	5	Yoseph Bar-Cohen, Ed., Electroactive Polymer (EAP) Actuators as Artificial Muscles, SPIE Press (2001), Chapter 1, pp. 3-44					
<i>AR</i>	6	Yoseph Bar-Cohen, Ed., Electroactive Polymer (EAP) Actuators as Artificial Muscles, SPIE Press (2001), Chapter 7, pp. 193-221.					
EXAMINER <i>Aaron Rose</i>				DATE CONSIDERED <i>8/9/2004</i>			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

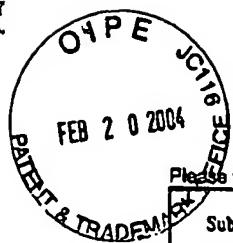
INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				ATTY DOCKET NO. 02-076 C1		SERIAL NO.. Unassigned	
				Lucien Alfred Couvillon Jr.			
				FILING Filed Herewith	GROUP Unassigned		
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AP	34	6,249,076 B1	6/19/01	Madden et al.	310	363	
	35	5,250,167	10/5/93	Adolf et al.	204	299	
	36	5,389,222	2/14/95	Shahinpoor	204	299.2	
	37	5,556,700	9/17/96	Kaneto et al.	428	332	
	38	5,651,366	7/29/97	Liang et al.	128	662.06	
	39	5,771,902	6/30/98	Lee et al.	128	897	
	40	6,109,852	8/29/00	Shahinpoor et al.	414	1	
	41	5,535,759	7/16/96	Wilk	128	898	
	42	6,117,296	9/12/00	Thomson	204	607	
	43	5,368,015	11/29/94	Wilk	128	4	
AR	44	5,486,182	1/23/96	Nakao et al.	606	114	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>							
AR	7	Jeón et al., Smart Structures and Materials 2001: Electroactive Polymer Actuators and Devices, Yoseph Bar-Cohen, Ed., Proceedings of SPIE Vol. 4329 (5-8 March 2001), pp. 380-388.					
AR	8	Cho et al., Smart Structures and Materials 2001: Electroactive Polymer Actuators and Devices, Yoseph Bar-Cohen, Ed., Proceedings of SPIE Vol. 4329 (5-8 March 2001), pp. 466-474.					
EXAMINER				DATE CONSIDERED			
						<i>8/9/2004</i>	

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>		Docket Number (Optional) 02-076 C1	Application Number Unassigned
		Applicant(s) Lucien Alfred Couvillon Jr.	
		Filing Date Filed Herewith	Group Art Unit Unassigned
*EXAMINER INITIAL <i>AR</i>	OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>		
9	Kubler et al., "An Endoscopic Navigation System," Proceedings of Medicine Meets Virtual Reality - MMVR 2001, pp. 253-255.		
10	Kubler et al., "Endoscopic Robots," Proceedings of 3rd International Conference on Medical Image Computing and Computer-Assisted Intervention - MICCAI 2000, pp. 949-955.		
11	Worldwide ElectroActive Polymers (Artificial Muscles) Newsletter, Vol. 3, No. 1 (June 2001).		
12	"Smart Catheters," from http://www.piaggio.cci.unipi.it/cathe.htm , printed 8/27/01		
13	"Snake-like Flexible Micro-robot," from http://www.agip.sciences.univ-metz.fr/~mihalach/Copernicus_project_engl.html , Project start: 1 May 1995.		
14	"Robot Snake with Flexible Real-Time Control," from http://ais.gmd.de/BAR/snake.html , last updated 01-10-17.		
15	Jager et al., "Microfabricating Conjugated Polymer Actuators," Science, Vol. 290 (24 November 2000), pp. 1540-1545.		
16	Electroactive Polymer (EAP) Actuators as Artificial Muscles, Yoseph Bar-Cohen, Ed., SPIE Press (2001), Chapter 16, pp. 457-495.		
17	Electroactive Polymer (EAP) Actuators as Artificial Muscles, Yoseph Bar-Cohen, Ed., SPIE Press (2001), Chapter 21, pp. 615-659.		
18	Yoseph Bar Cohen, Smart Structures and Materials 2001: Electroactive Polymer Actuators and Devices, Yoseph Bar-Cohen, Ed., Proceedings of SPIE Vol. 4329 (5-8 March 2001), pp. 1-6.		
19	Madden et al., Smart Structures and Materials 2001: Electroactive Polymer Actuators and Devices, Yoseph Bar-Cohen, Ed., Proceedings of SPIE Vol. 4329 (5-8 March 2001), pp. 72-83.		
20	Pelrine et al., Smart Structures and Materials 2001: Electroactive Polymer Actuators and Devices, Yoseph Bar-Cohen, Ed., Proceedings of SPIE Vol. 4329 (5-8 March 2001), pp. 335-349.		
EXAMINER <i>Aaron Roline</i>	DATE CONSIDERED <i>8/9/2004</i>		
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>		Docket Number (Optional) 02-076 C1	Application Number Unassigned
		Applicant(s) Lucien Alfred Couvillon, Jr.	
		Filing Date Filed Herewith	Group Art Unit Unassigned
*EXAMINER INITIAL	OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>		
<i>AR</i>	21	John David Wyndham Madden, "Conducting Polymer Actuators," Massachusetts Institute of Technology, September 2000.	
	22	'Viking Optima,' from http://www.guidant.com/products/optima.shtml , 2002 Guidant Corporation	
	23	Active Endoscope (ELASTOR, Shape Memory Alloy Robot), http://mozu.mes.titech.ac.jp/research/medical/endoscope/endoscope.html , 9 pages including 3 Figures and 4 photographs.	
	24	Koji Ikuta et al., "Shape Memory Alloy Servo Actuator System With Electric Resistance Feedback And Application For Active Endoscope," IEEE Int'l Conference on Robotics and Automation (April 24-29, 1988), pp. 427-430.	
<i>AR</i>	25	David L. Brock, "Review of Artificial Muscle based on Contractile Polymers," MIT Artificial Intelligence Laboratory, A.I. Memo No. 1330, November 1991, pages 1-12.	
EXAMINER	<i>Aaron Rose</i>		DATE CONSIDERED <i>8/8/2004</i>
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				Docket Number (Optional) 02-076 C1	Application Number Unassigned		
				Applicant(s) Lucien Alfred Couvillon, Jr.			
				Filing Date Filed Herewith	Group Art Unit 3739		
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	R&P	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>AK</i>	1.	6,514,237 B1	2/4/2003	Maseda	604	533	
<i>AK</i>	2.	6,468,203 B2	10/22/2002	Belson	600	146	
<i>AK</i>	3.	6,071,234	6/6/2000	Takada	600	114	
	4.	5,239,982	8/31/93	Trauthen	128	4	
	5.	5,347,987	9/20/94	Feldstein et al.	128	4	
	6.	5,957,833	9/28/99	Shan	600	117	
	7	6,428,470	8/6/02	Thompson	600	173	
<i>AK</i>	8	6,547,723	4/15/03	Ouchi	600	146	
FOREIGN PATENT DOCUMENTS							
	R&P	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Transition YES NO
OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>							
EXAMINER	<i>Aaron E. Boone</i>			DATE CONSIDERED	<i>8/19/2004</i>		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							



Docket No.: 02-076 C1

Please type a plus sign (+) inside this box. FORM PTO/SB/08

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>		<i>Complete if Known</i>
Application Number	10/751,544	
Filing Date	01/05/2004	
First Named Inventor	Lucien Alfred Couvillon, Jr.	
Group Art Unit	3739	
Examiner Name	Unassigned	
Sheet	1	of . 2
Attorney Docket Number		02-076 C1

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T
		Office ²	Number ³	Class/Subclass			
<i>AK</i>	1.	EP	0943402 A2	B25J 9/10	Agency of Industrial Science and Technology, Tokyo; Japan Chemical Innovation Institute	09/22/1999	
<i>AK</i>	2.	JP	05177002	A61M 25/01	Olympus Optical Co. Ltd.	07/20/1993	✓
<i>AK</i>	3.	FR	2732225	A61M 25/01	Mazars Paul	10/04/1996	✓
<i>AK</i>	4.	WO	99/60267	F03G 7/06	Ronald S. Maynard	11/23/1999	
Examiner Signature	<i>Caren L. Lewis</i>				Date Considered	<i>8/9/2004</i>	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. ⁶Applicant is to place a check mark here if English Language Translation is attached.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English Language Translation is attached.

Please type a plus sign (+) inside this box. FORM PTO/SB/08

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				<i>Complete If Known</i>	
Sheet	2	of	2	Application Number	10/751,544
				Filing Date	01/05/2004
				First Named Inventor	Lucien Alfred Couvillon, Jr.
				Group Art Unit	3739
				Examiner Name	Unassigned
				Attorney Docket Number	02-276 C1

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
<i>AK</i>	1	A. DELLA SANTA et al., "Intravascular Microcatheters Steered by Conducting Polymer Actuators," 18 th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Amsterdam 1996, pp. 2203-2204.
<i>AK</i>	2.	ALBERTO MAZZOLDI et al., "Conductive Polymer Based Structures for a Steerable Catheter," <i>Smart Structures and Materials 2000: Electroactive Polymer Actuators and Devices</i> , Y. Bar-Cohen, ed., Proceedings of SPIE, Vol. 3987 (2000), pp. 273-280.

Examiner Signature	<i>Aaron Jerome</i>	Date Considered	<i>8/9/2004</i>
-----------------------	---------------------	--------------------	-----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with NFPA 5000. Providing thorough citations is encouraged.

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.